TABLE OF CONTENTS ~ PRELIMINARY

3.2.9 Preliminary situation plans

The office requires a preliminary situation plan for each new bridge and each bridge that is to be widened or lengthened. The plan and longitudinal section (or profile) views should be plotted at a 1 inch = 40 feet (1:500 for metric plans) scale on an 11-inch by 17-inch (280 mm by 432 mm) drawing. For long bridges the designer may use an alternate scale, provided that the alternate scale meets the approval of the supervising Section Leader.

Detailed structural design generally is not required for preparation of a preliminary situation plan. Thus pier and abutment details, pile types and lengths, and beam spacings need not be determined unless they affect vertical clearance, constructability, beam type, or structure length. Example preliminary situation plan drawings are shown in the commentary.

A preliminary situation plan for a bridge or culvert of bridge length over a waterway requires the following additional items:

- Hydraulic computations
- Backwater computations
- Scour computations

Preliminary situation plan submittal information to Iowa DOT should include the situation plan, hydraulic calculations, and surveyed valley cross section. The form “Risk Assessment for Bridges” (Form 621012) needs to be submitted for all consultant projects and for stream bridges that need FHWA approval. For a bridge-size RCB, length calculations shall be provided and either shown on a pink sheet or in some other format. An RCB is bridge-size when the clear span distance along centerline of roadway is more than 20 feet (6.1 m). The skewed distance along spans and interior walls shall be taken into account, but the exterior walls are not included.

A Preliminary Bridge Plan Checklist is provided on the Iowa DOT Bridge Office website. Consultants shall apply the checklist as needed and include it with the submittal. Sheet layout guidelines are provided in the commentary.